

**10. NAME(S) OF STRUCTURE**

State Bridge Number 216

**11. PHOTOS (W/ FILM ROLL & FRAME NO.) AND SKETCH MAP OF LOCATION**

33A:9-20



33A:10

Mack, Warren W. "A History of Motor Highways in Delaware", in Reed, Henry Clay, Delaware: A History of the First State, vol.2, pp.535-550 (NY: Lewis Historical Publishing Co., 1947).

Delaware State Program. Delaware State Highways; The Story of Roads in Delaware... [Newark, Delaware: Press of Kells, 1919].

Federal Writers' Project. Delaware: A Guide to the First State. (New York: Viking Press, 1938).

Spero, Paula A. C. Metal Truss Bridges in Virginia. ((Charlottesville, Virginia: Virginia Highway & Transportation Research Council, 1978-1981).

Hagley Library. New Castle County Quarterly Report Records.

Delaware State Archives. New Castle County Levy Court Records. Specifications, Proposals, Contract and Bond files.

Delaware State Archives. New Castle County Road Commissioners Records, 1750-1940.

Delaware DOT records: Annual Reports; contract files.

Plans on file at Delaware DOT: Contract # BNC-43, 87-570-15

**13. INVENTORIED BY:**

**AFFILIATION**

**DATE**

P.A.C. Spero & Company with Kidde Consultants for Delaware DOT

April-November 1988



# HABS/HAER INVENTORY

See "HABS/HAER Inventory Guidelines" before filling out this card.

## 1. NAME(S) OF STRUCTURE

State Bridge Number 216  
Thompson's Station Bridge

## 2. LOCATION

Chambers Rock Road over White Clay Creek  
Newark, New Castle County, Delaware

## 3. DATE(S) OF CONSTRUCTION

1928

## 4. USE (ORIGINAL/CURRENT)

Vehicular

## 5. RATING

MT

## 6. CONDITION

Fair: Wing walls have failed in several areas; bad mortar. Some section loss has occurred, especially connection plates.

State Highway Bridge 216 is a 66'-8" riveted Warren pony truss, divided into five panels. The top chords and end posts are made of double 8" channels with cover plates at the top and lacing on the bottom; the diagonals and bottom chords are made of double 5"x 3 1/2" angles with stay plates; and the posts are built-up members comprising angles and plates. The transverse floor beams extend beyond the truss to support angle A-braces for the posts. One lane of traffic is carried on the 16'-5" wide steel deck. The truss is supported on stone abutments with U-shaped stone wing walls; the substructure has been parged with concrete. A plaque on the north portal indicates the 1928 construction date.

Delaware Department of Transportation records state that Bridge 216, known at the time as the "Thompson's Station Bridge," was built in 1928 by authority of the Levy Court of New Castle County. It was designed by the County Engineer's office and plans are on file at the Delaware Department of Transportation. The quarterly statements from the County Engineer's office identify that at least \$8270.76 of Rural Bridge Bond money was allotted toward the construction of the bridge. The configuration and details of the bridge are illustrated and correspond to the existing configuration. Charles E. Grubb served as the County Engineer for the project. The specifications were distributed in October 1928 and bids were received November 11, 1928. The contractor is undocumented; structural steel was fabricated by the Belmont Ironworks of Philadelphia, Pennsylvania. Bridge 216 is nearly identical to Bridge 112, the Yorklyn Road Bridge, constructed during the following year.

State Bridge 216 is significant as one of the six intact historic metal highway truss bridges in Delaware. Although few metal truss bridges remain in Delaware, Delaware Department of Transportation photographic archives from the 1920s illustrate approximately ninety metal truss bridges in New Castle County. In its Warren pony truss configuration employing standardized members, Bridge 216 is typical of the small spans erected along local roadways in rural areas throughout the country in response to increasing traffic in the late nineteenth and early twentieth century. The metal truss bridge type offered several advantages in this application. It was adaptable to a wide variety of site conditions, its structural behavior was scientifically understood, and its prefabricated components made it easy and economical to manufacture, ship, and erect. Structures like Bridge 216 played a vital role in the economic development of rural areas during the last quarter of the nineteenth century and well into the twentieth century, as local transportation networks underwent the initial phases of development. The Warren truss was patented in 1848 by two British engineers, James Warren and Willoughby Monzoni. The original form of a Warren truss was a series of equilateral triangles and as such represents one of the earliest truss types. Later modifications included subdivision by verticals, as seen in Bridge 216, or addition of alternate diagonals.